

In the Claims:

Please amend the claims as indicated below. This listing of claims replaces all prior versions.

1. (currently amended) A telephony private branch exchange routing arrangement adapted to route IP telephony data, the routing arrangement comprising:

 a call-control application having an object-oriented programming (OOP) telephony interface and programmed, using OOP and the OOP telephony interface, to control the routing of calls;

 a device-control application adapted to provide telephony communication signals for the routed calls and to interface between the call-control application and a plurality of telephony devices; and

 a configuration manager adapted to provide configuration information for the call-control application and the device-control application.

2. (original) The routing arrangement of claim 1, wherein the configuration manager is further adapted to provide configuration information for a telephony device communicatively coupled to the routing arrangement.

3. (original) The routing arrangement of claim 1, wherein the OOP interface of the call-control application includes a Java telephony application programming interface (JTAPI).

4. (original) The routing arrangement of claim 3, wherein the JTAPI is adapted to interface with both local and remote applications.

5. (original) The routing arrangement of claim 1, wherein the call-control application further includes a phonelet adapted to interface between the routing arrangement and a telephone user for controlling call routing to the user.

6. (original) The routing arrangement of claim 5, wherein the phonelet is programmed with a selected access level to the routing arrangement.

7. (original) The routing arrangement of claim 1, wherein the call-control application is adapted to couple to and route calls via an Internet protocol gateway.
8. (original) The routing arrangement of claim 1, wherein the call-control application further comprises a phone configuration application adapted to communicate telephony device configuration selections between a user and the routing arrangement.
9. (original) The routing arrangement of claim 8, wherein the phone configuration application is further adapted to monitor active calls.
10. (original) The routing arrangement of claim 8, wherein the phone configuration application is adapted to communicate telephony device configuration via an Internet browser.
11. (original) The routing arrangement of claim 1, wherein the call-control application includes an administration call monitor application adapted to provide real-time call monitoring to an administrator via a user interface.
12. (original) The routing arrangement of claim 1, wherein the device control application is adapted to use JTAPI to communicate with the call control application.
13. (original) The routing arrangement of claim 1, wherein the device control application includes a media development kit adapted to convert between logical data that the call-control application uses and telephony data that the plurality of telephony devices use.
14. (original) The routing arrangement of claim 13, wherein the device control application includes at least one protocol handler communicatively coupled to the media development kit via a media device application protocol interface (MDAPI) and is adapted to provide an interface between the media development kit and external hardware equipment controlled by the routing arrangement.

15. (original) The routing arrangement of claim 14, wherein the external hardware equipment includes at least one of: an IP analog telephone interface, and IP digital telephone interface, a SIP gateway and an H323 gateway.

16. (original) The routing arrangement of claim 1, wherein the device-control application is adapted to provide telephony communication signals including at least one of: DTMF tone, dial tone, off hook, ring, ring-back, ring-back stop, connect, hang-up, delete connection, call-waiting, alert and digit signals.

17. (original) The routing arrangement of claim 1, wherein the configuration manager is further adapted to edit the configuration information in response to a user request.

18. (original) The routing arrangement of claim 17, wherein the configuration manager is programmed to permit user editing based upon an access code provided by the user, wherein the level of editing permitted is based upon the security level associated with the user access code.

19. (original) The routing arrangement of claim 1, wherein the configuration manager is adapted to store configuration data.

20. (original) The routing arrangement of claim 19, wherein the stored configuration data is stored in the form of enterprise java beans (EJB).

21. (original) The routing arrangement of claim 1, wherein the configuration manager includes an extensible markup language (XML) arrangement adapted to transfer structured information data to a user, the call-control application and the device-control application, the data including content and an indicator of the role the content plays.

22. (original) The routing arrangement of claim 1, wherein the configuration manager further includes a servlet adapted to interface with an Internet browser for editing the configuration information.

23. (currently amended) A programmable communications network for communicatively coupling telephony stations, the network comprising:

a plurality of communications stations communicatively coupled to each other, at least one of the plurality of communications stations being adapted to communicate call-method configuration data; and

a computer server arrangement coupled to the communications stations and comprising:

core configuration data;

a call-control application programmed, using an object-oriented programming (OOP) interface, with the call-method configuration data in combination with the core configuration data; and

an IP telephony switch communicatively coupled to the communications stations and responsive to the programmed call-control application, for coordinating communication between selected ones of the communications stations.

24. (original) The network of claim 23, wherein at least one of the plurality of communications stations includes a user interface.

25. (original) The network of claim 23, wherein the plurality of communications stations includes at least one of: an analog telephone coupled to an analog-to-IP converter; a wireless station, an Internet interface station, a computer, and IP phone and a videoconferencing device.

26. (original) The network of claim 23, wherein the call control application is configured using a combination of internal OOP program instructions and OOP program instructions received from an external source.

27. (original) The network of claim 23, wherein OOP program instructions are provided by a user at one of the plurality of communications stations.

28. (original) The network of claim 23, wherein the telephony data includes at least one of: voice data, image data and communications control data.

29. (original) The network of claim 23, further comprising:

a telephony service providing arrangement adapted to use the computer server arrangement to receive data including telephony data and to rout the data as IP telephony data; and

a communications line coupled to the service provider and adapted to communicate the IP telephony data.

30. (original) The network of claim 23, wherein the computer server arrangement is adapted to monitor the locations of the communications stations and, based on the locations, to assign a telephony communications rate for charging a user at one of the plurality of communications stations for the communicative coupling.

31. (original) The network of claim 30, wherein the computer server arrangement is further adapted to generate data representing the monitored locations and a communication between stations and, based on the generated data, assign a fee for the communication.

32. (original) The network of claim 23, wherein the communications stations are communicatively coupled via at least one of: a PSTN, the Internet, a LAN, a wireless link, coaxial cable, a T1 link, a T3 link and a DSL link.

33. (currently amended) A telephony private branch exchange routing arrangement adapted to route IP telephony data, the routing arrangement comprising:

means for controlling telephony calls and including an object-oriented programming (OOP) telephony interface and programmed, using OOP and the OOP telephony interface, to control the routing of calls;

means for device control adapted to provide telephony communication signals for the routed calls and to interface between the means for controlling telephony calls and a plurality of telephony devices; and

means for configuration managing adapted to provide configuration information for the call-control application and the device-control application.

34. (original) A method for providing telephony communications, the method comprising:

providing a configurable IP telephony router communicatively coupled to a communications network and adapted to communicate telephony data;

providing configuration information to the telephony router and controlling the router therefrom;

sending telephony data to the router via the communications network and receiving the telephony data at the router; and

using the provided configuration information to route telephony data via the router.

35. (original) The method of claim 34, wherein providing a configurable IP telephony router includes providing:

a call-control application having an OOP telephony interface and programmed, using OOP and the OOP telephony interface, to control the routing of telephone calls;

a device-control application adapted to provide telephony communication signals for the routed calls and to interface between the call-control application and a plurality of telephony devices; and

a configuration manager adapted to provide configuration information for the call-control application and the device-control application.

36. (original) The method of claim 34, wherein providing a configurable IP telephony router includes providing a router adapted to be used at a telephone service provider for controlling telephone calls to a plurality of subscribers.

37. (original) The method of claim 34, wherein providing configuration information includes assigning a telephone number to a selected IP telephony address.

38. (original) The method of claim 34, wherein providing configuration information includes providing call control configuration information for controlling at least one of: call forwarding, voicemail, call conferencing, video, display options, call waiting, caller ID and call blocking.

39. (original) The method of claim 34, further comprising prompting a user for an input, and wherein providing configuration information includes providing information in response to the prompt.

40. (original) The method of claim 34, wherein sending telephony data includes sending telephone call control data for controlling the routing of a least one telephone call.

41. (original) The method of claim 34, wherein sending telephony data includes sending communications including at least one of: voice data, image data and video data.

42. (original) The method of claim 34, wherein using the provided configuration information to route telephony data includes at least one of: routing telephony data within a user premise, routing telephony data to a plurality of premises, routing telephony data via the Internet, and routing telephony data via a PSTN.

43. (original) The method of claim 34, further comprising:

- determining a relationship between a call source and a call destination;
- correlating the determined relationship to a selected one of a group of pre-determined relationships, each predetermined relationship having a pre-selected telephony rate application; and
- applying the telephony rate to the communication.

44. (original) The method of claim 43, wherein the rate is based on a relationship including at least one of: the time that the call takes place, the location of sender/receiver, the amount of information sent, the duration of the call, a selected security level and a selected encryption level.